

Lys Tyr Gly Ala Ser Trp Thr Ala Glu Lys Ala Ile Ala Gln Leu Asn
 180 185 190
 Ser Lys Tyr Gly Lys Lys Val Leu Ile Asn Leu Phe Val Gly Thr Asp
 195 200 205
 Asp Lys Asn Ser Val Asn His Val Ile His Ile Asp Gln Pro Arg Leu
 210 215 220
 Gly Leu Pro Ser Arg Asp Tyr Tyr Glu Cys Thr Gly Ile Tyr Lys Glu
 225 230 235 240
 Ala Cys Thr Ala Tyr Val Asp Phe Met Ile Ser Val Ala Arg Leu Ile
 245 250 255
 Arg Gln Glu Glu Arg Leu Pro Ile Asp Glu Asn Gln Leu Ala Leu Glu
 260 265 270
 Met Asn Lys Val Met Glu Leu Glu Lys Glu Ile Ala Asn Ala Thr Ala
 275 280 285
 Lys Pro Glu Asp Arg Asn Asp Pro Met Leu Leu Tyr Asn Lys Met Thr
 290 295 300
 Leu Ala Gln Ile Gln Asn Asn Phe Ser Leu Glu Ile Asn Gly Lys Pro
 305 310 315 320
 Phe Ser Trp Leu Asn Phe Thr Asn Glu Ile Met Ser Thr Val Asn Ile
 325 330 335
 Ser Ile Thr Asn Glu Glu Asp Val Val Val Tyr Ala Pro Glu Tyr Leu
 340 345 350
 Thr Lys Leu Lys Pro Ile Leu Thr Lys Tyr Ser Ala Arg Asp Leu Gln
 355 360 365
 Asn Leu Met Ser Trp Arg Phe Ile Met Asp Leu Val Ser Ser Leu Ser
 370 375 380
 Arg Thr Tyr Lys Glu Ser Arg Asn Ala Phe Arg Lys Ala Leu Tyr Gly
 385 390 395 400
 Thr Thr Ser Glu Thr Ala Thr Trp Arg Arg Cys Ala Asn Tyr Val Asn
 405 410 415
 Gly Asn Met Glu Asn Ala Val Gly Arg Leu Tyr Val Glu Ala Ala Phe
 420 425 430
 Ala Gly Glu Ser Lys His Val Val Glu Asp Leu Ile Ala Gln Ile Arg
 435 440 445
 Glu Val Phe Ile Gln Thr Leu Asp Asp Leu Thr Trp Met Asp Ala Glu
 450 455 460
 Thr Lys Lys Arg Ala Glu Glu Lys Ala Leu Ala Ile Lys Glu Arg Ile
 465 470 475 480

Gly Tyr Pro Asp Asp Ile Val Ser Asn Asp Asn Lys Leu Asn Asn Glu
 485 490 495
 Tyr Leu Glu Leu Asn Tyr Lys Glu Asp Glu Tyr Phe Glu Asn Ile Ile
 500 505 510
 Gln Asn Leu Lys Phe Ser Gln Ser Lys Gln Leu Lys Lys Leu Arg Glu
 515 520 525
 Lys Val Asp Lys Asp Glu Trp Ile Ser Gly Ala Ala Val Val Asn Ala
 530 535 540
 Phe Tyr Ser Ser Gly Arg Asn Gln Ile Val Phe Pro Ala Gly Ile Leu
 545 550 555 560
 Gln Pro Pro Phe Phe Ser Ala Gln Gln Ser Asn Ser Leu Asn Tyr Gly
 565 570 575
 Gly Ile Gly Met Val Ile Gly His Glu Ile Thr His Gly Phe Asp Asp
 580 585 590
 Asn Gly Arg Asn Phe Asn Lys Asp Gly Asp Leu Val Asp Trp Trp Thr
 595 600 605
 Gln Gln Ser Ala Ser Asn Phe Lys Glu Gln Ser Gln Cys Met Val Tyr
 610 615 620
 Gln Tyr Gly Asn Phe Ser Trp Asp Leu Ala Gly Gly Gln His Leu Asn
 625 630 635 640
 Gly Ile Asn Thr Leu Gly Glu Asn Ile Ala Asp Asn Gly Gly Leu Gly
 645 650 655
 Gln Ala Tyr Arg Ala Tyr Gln Asn Tyr Ile Lys Lys Asn Gly Glu Glu
 660 665 670
 Lys Leu Leu Pro Gly Leu Asp Leu Asn His Lys Gln Leu Phe Phe Leu
 675 680 685
 Asn Phe Ala Gln Val Trp Cys Gly Thr Tyr Arg Pro Glu Tyr Ala Val
 690 695 700
 Asn Ser Ile Lys Thr Asp Val His Ser Pro Gly Asn Phe Arg Ile Ile
 705 710 715 720
 Gly Thr Leu Gln Asn Ser Ala Glu Phe Ser Glu Ala Phe His Cys Arg
 725 730 735
 Lys Asn Ser Tyr Met Asn Pro Glu Lys Lys Cys Arg Val Trp
 740 745 750

<210> 2

<211> 749

<212> PRT

<213> Homo sapiens

<400> 2

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Arg	Gly	Thr	Arg	Ile	Ala	Leu	Val	Val	Phe	Val	Gly	Gly	Thr	Leu	Val
			20					25					30		
Leu	Gly	Thr	Ile	Leu	Phe	Leu	Val	Ser	Gln	Gly	Leu	Leu	Ser	Leu	Gln
		35					40					45			
Ala	Lys	Gln	Glu	Tyr	Cys	Leu	Lys	Pro	Glu	Cys	Ile	Glu	Ala	Ala	Ala
	50					55					60				
Ala	Ile	Leu	Ser	Lys	Val	Asn	Leu	Ser	Val	Asp	Pro	Cys	Asp	Asn	Phe
65					70					75					80
Phe	Arg	Phe	Ala	Cys	Asp	Gly	Trp	Ile	Ser	Asn	Asn	Pro	Ile	Pro	Glu
				85					90					95	
Asp	Met	Pro	Ser	Tyr	Gly	Val	Tyr	Pro	Trp	Leu	Arg	His	Asn	Val	Asp
			100					105					110		
Leu	Lys	Leu	Lys	Glu	Leu	Leu	Glu	Lys	Ser	Ile	Ser	Arg	Arg	Arg	Asp
		115					120					125			
Thr	Glu	Ala	Ile	Gln	Lys	Ala	Lys	Ile	Leu	Tyr	Ser	Ser	Cys	Met	Asn
	130					135					140				
Glu	Lys	Ala	Ile	Glu	Lys	Ala	Asp	Ala	Lys	Pro	Leu	Leu	His	Ile	Leu
145					150					155					160
Arg	His	Ser	Pro	Phe	Arg	Trp	Pro	Val	Leu	Glu	Ser	Asn	Ile	Gly	Pro
				165					170					175	
Glu	Gly	Val	Trp	Ser	Glu	Arg	Lys	Phe	Ser	Leu	Leu	Gln	Thr	Leu	Ala
			180					185					190		
Thr	Phe	Arg	Gly	Gln	Tyr	Ser	Asn	Ser	Val	Phe	Ile	Arg	Leu	Tyr	Val
		195					200					205			
Ser	Pro	Asp	Asp	Lys	Ala	Ser	Asn	Glu	His	Ile	Leu	Lys	Leu	Asp	Gln
	210					215					220				
Ala	Thr	Leu	Ser	Leu	Ala	Val	Arg	Glu	Asp	Tyr	Leu	Asp	Asn	Ser	Thr
225					230					235					240
Glu	Ala	Lys	Ser	Tyr	Arg	Asp	Ala	Leu	Tyr	Lys	Phe	Met	Val	Asp	Thr
				245					250					255	
Ala	Val	Leu	Leu	Gly	Ala	Asn	Ser	Ser	Arg	Ala	Glu	His	Asp	Met	Lys
			260					265					270		
Ser	Val	Leu	Arg	Leu	Glu	Ile	Lys	Ile	Ala	Glu	Ile	Met	Ile	Pro	His
		275					280					285			
Glu	Asn	Arg	Thr	Ser	Glu	Ala	Met	Tyr	Asn	Lys	Met	Asn	Ile	Ser	Glu
	290					295					300				

Leu Ser Ala Met Ile Pro Gln Phe Asp Trp Leu Gly Tyr Ile Lys Lys
 305 310 315 320

Val Ile Asp Thr Arg Leu Tyr Pro His Leu Lys Asp Ile Ser Pro Ser
 325 330 335

Glu Asn Val Val Val Arg Val Pro Gln Tyr Phe Lys Asp Leu Phe Arg
 340 345 350

Ile Leu Gly Ser Glu Arg Lys Lys Thr Ile Ala Asn Tyr Leu Val Trp
 355 360 365

Arg Met Val Tyr Ser Arg Ile Pro Asn Leu Ser Arg Arg Phe Gln Tyr
 370 375 380

Arg Trp Leu Glu Phe Ser Arg Val Ile Gln Gly Thr Thr Thr Leu Leu
 385 390 395 400

Pro Gln Trp Asp Lys Cys Val Asn Phe Ile Glu Ser Ala Leu Pro Tyr
 405 410 415

Val Val Gly Lys Met Phe Val Asp Val Tyr Phe Gln Glu Asp Lys Lys
 420 425 430

Glu Met Met Glu Glu Leu Val Glu Gly Val Arg Trp Ala Phe Ile Asp
 435 440 445

Met Leu Glu Lys Glu Asn Glu Trp Met Asp Ala Gly Thr Lys Arg Lys
 450 455 460

Ala Lys Glu Lys Ala Arg Ala Val Leu Ala Lys Val Gly Tyr Pro Glu
 465 470 475 480

Phe Ile Met Asn Asp Thr His Val Asn Glu Asp Leu Lys Ala Ile Lys
 485 490 495

Phe Ser Glu Ala Asp Tyr Phe Gly Asn Val Leu Gln Thr Arg Lys Tyr
 500 505 510

Leu Ala Gln Ser Asp Phe Phe Trp Leu Arg Lys Ala Val Pro Lys Thr
 515 520 525

Glu Trp Phe Thr Asn Pro Thr Thr Val Asn Ala Phe Tyr Ser Ala Ser
 530 535 540

Thr Asn Gln Ile Arg Phe Pro Ala Gly Glu Leu Gln Lys Pro Phe Phe
 545 550 555 560

Trp Gly Thr Glu Tyr Pro Arg Ser Leu Ser Tyr Gly Ala Ile Gly Val
 565 570 575

Ile Val Gly His Glu Phe Thr His Gly Phe Asp Asn Asn Gly Arg Lys
 580 585 590

Tyr Asp Lys Asn Gly Asn Leu Asp Pro Trp Trp Ser Thr Glu Ser Glu
 595 600 605

Glu Lys Phe Lys Glu Lys Thr Lys Cys Met Ile Asn Gln Tyr Ser Asn
610 615 620

Tyr Tyr Trp Lys Lys Ala Gly Leu Asn Val Lys Gly Lys Arg Thr Leu
625 630 635 640

Gly Glu Asn Ile Ala Asp Asn Gly Gly Leu Arg Glu Ala Phe Arg Ala
645 650 655

Tyr Arg Lys Trp Ile Asn Asp Arg Arg Gln Gly Leu Glu Glu Pro Leu
660 665 670

Leu Pro Gly Ile Thr Phe Thr Asn Asn Gln Leu Phe Phe Leu Ser Tyr
675 680 685

Ala His Val Arg Cys Asn Ser Tyr Arg Pro Glu Ala Ala Arg Glu Gln
690 695 700

Val Gln Ile Gly Ala His Ser Pro Pro Gln Phe Arg Val Asn Gly Ala
705 710 715 720

Ile Ser Asn Phe Glu Glu Phe Gln Lys Ala Phe Asn Cys Pro Pro Asn
725 730 735

Ser Thr Met Asn Arg Gly Met Asp Ser Cys Arg Leu Trp
740 745

<210> 3

<211> 732

<212> PRT

<213> Homo sapiens

<400> 3

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Arg Leu Pro Val Glu Gly Ser Arg Pro Trp Ala Val Ala Arg Arg Val
35 40 45

Leu Thr Ala Ile Leu Ile Leu Gly Leu Leu Leu Cys Phe Ser Val Leu
50 55 60

Leu Phe Tyr Asn Phe Gln Asn Cys Gly Pro Arg Pro Cys Glu Thr Ser
65 70 75 80

Val Cys Leu Asp Leu Arg Asp His Tyr Leu Ala Ser Gly Asn Thr Ser
85 90 95

Val Ala Pro Cys Thr Asp Phe Phe Ser Phe Ala Cys Gly Arg Ala Lys
100 105 110

Glu Thr Asn Asn Ser Phe Gln Glu Leu Ala Thr Lys Asn Lys Asn Arg

115 120 125
 Leu Arg Arg Ile Leu Glu Val Gln Asn Ser Trp His Pro Gly Ser Gly
 130 135 140
 Glu Glu Lys Ala Phe Gln Phe Tyr Asn Ser Cys Met Asp Thr Leu Ala
 145 150 155 160
 Ile Glu Ala Ala Gly Thr Gly Pro Leu Arg Gln Val Ile Glu Glu Leu
 165 170 175
 Gly Gly Trp Arg Ile Ser Gly Lys Trp Thr Ser Leu Asn Phe Asn Arg
 180 185 190
 Thr Leu Arg Leu Leu Met Ser Gln Tyr Gly His Phe Pro Phe Phe Arg
 195 200 205
 Ala Tyr Leu Gly Pro His Pro Ala Ser Pro His Thr Pro Val Ile Gln
 210 215 220
 Ile Asp Gln Pro Glu Phe Asp Val Pro Leu Lys Gln Asp Gln Glu Gln
 225 230 235 240
 Lys Ile Tyr Ala Gln Ile Phe Arg Glu Tyr Leu Thr Tyr Leu Asn Gln
 245 250 255
 Leu Gly Thr Leu Leu Gly Gly Asp Pro Ser Lys Val Gln Glu His Ser
 260 265 270
 Ser Leu Ser Ile Ser Ile Thr Ser Arg Leu Phe Gln Phe Leu Arg Pro
 275 280 285
 Leu Glu Gln Arg Arg Ala Gln Gly Lys Leu Phe Gln Met Val Thr Ile
 290 295 300
 Asp Gln Leu Lys Glu Met Ala Pro Ala Ile Asp Trp Leu Ser Cys Leu
 305 310 315 320
 Gln Ala Thr Phe Thr Pro Met Ser Leu Ser Pro Ser Gln Ser Leu Val
 325 330 335
 Val His Asp Val Glu Tyr Leu Lys Asn Met Ser Gln Leu Val Glu Glu
 340 345 350
 Met Leu Leu Lys Gln Arg Asp Phe Leu Gln Ser His Met Ile Leu Gly
 355 360 365
 Leu Val Val Thr Leu Ser Pro Ala Leu Asp Ser Gln Phe Gln Glu Ala
 370 375 380
 Arg Arg Lys Leu Ser Gln Lys Leu Arg Glu Leu Thr Glu Gln Pro Pro
 385 390 395 400
 Met Pro Ala Arg Pro Arg Trp Met Lys Cys Val Glu Glu Thr Gly Thr
 405 410 415
 Phe Phe Glu Pro Thr Leu Ala Ala Leu Phe Val Arg Glu Ala Phe Gly

420

425

430

Pro Ser Thr Arg Ser Ala Ala Met Lys Leu Phe Thr Ala Ile Arg Asp
 435 440 445

Ala Leu Ile Thr Arg Leu Arg Asn Leu Pro Trp Met Asn Glu Glu Thr
 450 455 460

Gln Asn Met Ala Gln Asp Lys Val Ala Gln Leu Gln Val Glu Met Gly
 465 470 475 480

Ala Ser Glu Trp Ala Leu Lys Pro Glu Leu Ala Arg Gln Glu Tyr Asn
 485 490 495

Asp Ile Gln Leu Gly Ser Ser Phe Leu Gln Ser Val Leu Ser Cys Val
 500 505 510

Arg Ser Leu Arg Ala Arg Ile Val Gln Ser Phe Leu Gln Pro His Pro
 515 520 525

Gln His Arg Trp Lys Val Ser Pro Trp Asp Val Asn Ala Tyr Tyr Ser
 530 535 540

Val Ser Asp His Val Val Val Phe Pro Ala Gly Leu Leu Gln Pro Pro
 545 550 555 560

Phe Phe His Pro Gly Tyr Pro Arg Ala Val Asn Phe Gly Ala Ala Gly
 565 570 575

Ser Ile Met Ala His Glu Leu Leu His Ile Phe Tyr Gln Leu Leu Leu
 580 585 590

Pro Gly Gly Cys Leu Ala Cys Asp Asn His Ala Leu Gln Glu Ala His
 595 600 605

Leu Cys Leu Lys Arg His Tyr Ala Ala Phe Pro Leu Pro Ser Arg Thr
 610 615 620

Ser Phe Asn Asp Ser Leu Thr Phe Leu Glu Asn Ala Ala Asp Val Gly
 625 630 635 640

Gly Leu Ala Ile Ala Leu Gln Ala Tyr Ser Lys Arg Leu Leu Arg His
 645 650 655

His Gly Glu Thr Val Leu Pro Ser Leu Asp Leu Ser Pro Gln Gln Ile
 660 665 670

Phe Phe Arg Ser Tyr Ala Gln Val Met Cys Arg Lys Pro Ser Pro Gln
 675 680 685

Asp Ser His Asp Thr His Ser Pro Pro His Leu Arg Val His Gly Pro
 690 695 700

Leu Ser Ser Thr Pro Ala Phe Ala Arg Tyr Phe Arg Cys Ala Arg Gly
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Ala Leu Leu Asn Pro Ser Ser Arg Cys Gln Leu Trp

<210> 4
 <211> 753
 <212> PRT
 <213> Homo sapiens

<400> 4

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			20					25					30		
His	Ser	Pro	Arg	Ser	Gly	Gln	Arg	Cys	Trp	Ala	Ala	Arg	Thr	Gln	Val
		35					40					45			
Glu	Lys	Arg	Leu	Val	Val	Leu	Val	Val	Leu	Leu	Ala	Ala	Gly	Leu	Val
	50					55					60				
Ala	Cys	Leu	Ala	Ala	Leu	Gly	Ile	Gln	Tyr	Gln	Thr	Arg	Ser	Pro	Ser
65					70				75						80
Val	Cys	Leu	Ser	Glu	Ala	Cys	Val	Ser	Val	Thr	Ser	Ser	Ile	Leu	Ser
				85					90					95	
Ser	Met	Asp	Pro	Thr	Val	Asp	Pro	Cys	His	Asp	Phe	Phe	Ser	Tyr	Ala
			100					105					110		
Cys	Gly	Gly	Trp	Ile	Lys	Ala	Asn	Pro	Val	Pro	Asp	Gly	His	Ser	Arg
	115						120					125			
Trp	Gly	Thr	Phe	Ser	Asn	Leu	Trp	Glu	His	Asn	Gln	Ala	Ile	Ile	Lys
	130					135					140				
His	Leu	Leu	Glu	Asn	Ser	Thr	Ala	Ser	Val	Ser	Glu	Ala	Glu	Arg	Lys
145					150					155					160
Ala	Gln	Val	Tyr	Tyr	Arg	Ala	Cys	Met	Asn	Glu	Thr	Arg	Ile	Glu	Glu
				165					170					175	
Leu	Arg	Ala	Lys	Pro	Leu	Met	Glu	Leu	Ile	Glu	Arg	Leu	Gly	Gly	Trp
		180						185					190		
Asn	Ile	Thr	Gly	Pro	Trp	Ala	Lys	Asp	Asn	Phe	Gln	Asp	Thr	Leu	Gln
		195					200					205			
Val	Val	Thr	Ala	His	Tyr	Arg	Thr	Ser	Pro	Phe	Phe	Ser	Val	Tyr	Val
	210					215					220				
Ser	Ala	Asp	Ser	Lys	Asn	Ser	Asn	Ser	Asn	Val	Ile	Gln	Val	Asp	Gln
225					230					235					240
Ser	Gly	Leu	Gly	Leu	Pro	Ser	Arg	Asp	Tyr	Tyr	Leu	Asn	Lys	Thr	Glu
				245					250					255	

Asn Glu Lys Val Leu Thr Gly Tyr Leu Asn Tyr Met Val Gln Leu Gly
 260 265 270
 Lys Leu Leu Gly Gly Gly Asp Glu Glu Ala Ile Arg Pro Gln Met Gln
 275 280 285
 Gln Ile Leu Asp Phe Glu Thr Ala Leu Ala Asn Ile Thr Ile Pro Gln
 290 295 300
 Glu Lys Arg Arg Asp Glu Glu Leu Ile Tyr His Lys Val Thr Ala Ala
 305 310 315 320
 Glu Leu Gln Thr Leu Ala Pro Ala Ile Asn Trp Leu Pro Phe Leu Asn
 325 330 335
 Thr Ile Phe Tyr Pro Val Glu Ile Asn Glu Ser Glu Pro Ile Val Val
 340 345 350
 Tyr Asp Lys Glu Tyr Leu Glu Gln Ile Ser Thr Leu Ile Asn Thr Thr
 355 360 365
 Asp Arg Cys Leu Leu Asn Asn Tyr Met Ile Trp Asn Leu Val Arg Lys
 370 375 380
 Thr Ser Ser Phe Leu Asp Gln Arg Phe Gln Asp Ala Asp Glu Lys Phe
 385 390 395 400
 Met Glu Val Met Tyr Gly Thr Lys Lys Thr Cys Leu Pro Arg Trp Lys
 405 410 415
 Phe Cys Val Ser Asp Thr Glu Asn Asn Leu Gly Phe Ala Leu Gly Pro
 420 425 430
 Met Phe Val Lys Ala Thr Phe Ala Glu Asp Ser Lys Ser Ile Ala Thr
 435 440 445
 Glu Ile Ile Leu Glu Ile Lys Lys Ala Phe Glu Glu Ser Leu Ser Thr
 450 455 460
 Leu Lys Trp Met Asp Glu Glu Thr Arg Lys Ser Ala Lys Glu Lys Ala
 465 470 475 480
 Asp Ala Ile Tyr Asn Met Ile Gly Tyr Pro Asn Phe Ile Met Asp Pro
 485 490 495
 Lys Glu Leu Asp Lys Val Phe Asn Asp Tyr Thr Ala Val Pro Asp Leu
 500 505 510
 Tyr Phe Glu Asn Ala Met Arg Phe Phe Asn Phe Ser Trp Arg Val Thr
 515 520 525
 Ala Asp Gln Leu Arg Lys Ala Pro Asn Arg Asp Gln Trp Ser Met Thr
 530 535 540
 Pro Pro Met Val Asn Ala Tyr Tyr Ser Pro Thr Lys Asn Glu Ile Val
 545 550 555 560

Phe Pro Ala Gly Ile Leu Gln Ala Pro Phe Tyr Thr Arg Ser Ser Pro
 565 570 575
 Lys Ala Leu Asn Phe Gly Gly Ile Gly Val Val Val Gly His Glu Leu
 580 585 590
 Thr His Ala Phe Asp Asp Gln Gly Arg Glu Tyr Asp Lys Asp Gly Asn
 595 600 605
 Leu Arg Pro Trp Trp Lys Asn Ser Ser Val Glu Ala Phe Lys Arg Gln
 610 615 620
 Thr Glu Cys Met Val Glu Gln Tyr Ser Asn Tyr Ser Val Asn Gly Glu
 625 630 635 640
 Pro Val Asn Gly Arg His Thr Leu Gly Glu Asn Ile Ala Asp Asn Gly
 645 650 655
 Gly Leu Lys Ala Ala Tyr Arg Ala Tyr Gln Asn Trp Val Lys Lys Asn
 660 665 670
 Gly Ala Glu His Ser Leu Pro Thr Leu Gly Leu Thr Asn Asn Gln Leu
 675 680 685
 Phe Phe Leu Gly Phe Ala Gln Val Trp Cys Ser Val Arg Thr Pro Glu
 690 695 700
 Ser Ser His Glu Gly Leu Ile Thr Asp Pro His Ser Pro Ser Arg Phe
 705 710 715 720
 Arg Val Ile Gly Ser Leu Ser Asn Ser Lys Glu Phe Ser Glu His Phe
 725 730 735
 Arg Cys Pro Pro Gly Ser Pro Met Asn Pro Pro His Lys Cys Glu Val
 740 745 750

Trp

<210> 5
 <211> 24
 <212> DNA
 <213> Artificial Sequence

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 <222> (14)
 <223> i

<220>
 <221> modified_base
 <222> (18)
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<220>
 <221> modified_base

<222> (21)

<223> i

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<223> Description of Artificial Sequence:Oligonucleotide
primers for RT-PCR reactions

<400> 5

tggatggatc gacngganac naca

24

<210> 6

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

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<222> (21)

<223> i

<220>

<223> Description of Artificial Sequence:Oligonucleotide
primers for RT-PCR reactions

<400> 6

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24

<210> 7

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

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<222> (20)

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32

<210> 8

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

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<223> i

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<223> Description of Artificial Sequence:

Oligonucleotide primers for RT-PCR reactions

<400> 8

agtngtnttt cccngcnggn agtancttgc ca

32

<210> 9

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

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<223> i

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<223> i

<220>

<223> Description of Artificial Sequence:Oligonucleotide
primers for RT-PCR reactions

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<223> i

<400> 9

annccnccna tctagtcngc ngactagttt etc

33

<210> 10

<211> 35

<212> DNA

<213> Artificial Sequence

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<222> (12)

<223> i

<220>

<221> modified_base

<222> (24)

<223> i

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<223> Description of Artificial Sequence:Oligonucleotide
primers for RT-PCR reactions

<400> 10

gatcaatctc tngatcgaag tctnaatctg gatgg

35

<210> 11

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

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<223> i

<220>

<221> modified_base

<222> (31)

<223> i

<220>

<223> Description of Artificial Sequence:Oligonucleotide
primers for RT-PCR reactions

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37

<210> 12

<211> 2925

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (332) .. (2626)

<400> 12

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gcagtgactg agagcaccag ggtcccctgg gcacttgggg cacagcttac agcattgaga 180
gcagagacca ggacagtgca ccagcttcag tgtgtcctag gcacccgatc cgggctccag 240
ctgcctctct cctagccctg gcctgggggg cttagcggtg tgccttcac ccagaaccgg 300
ctgatagggg aagtctgaga gcccagtggg g atg gtg gag aga gca ggc tgg      352
                               Met Val Glu Arg Ala Gly Trp
                               1                               5

tgt cgg aag aag tcc cca ggc ttc gtg gag tat ggg ctg atg gtg ctg      400
Cys Arg Lys Lys Ser Pro Gly Phe Val Glu Tyr Gly Leu Met Val Leu
          10                               15                               20

ctg ctg ctg ttg ctg gga gcc ata gtg act ctg ggt gtc ttc tac agc      448
Leu Leu Leu Leu Leu Gly Ala Ile Val Thr Leu Gly Val Phe Tyr Ser
          25                               30                               35

ata ggg aag cag ctg ccc ctc tta act agc ctg cta cac ttc tcc tgg      496
Ile Gly Lys Gln Leu Pro Leu Leu Thr Ser Leu Leu His Phe Ser Trp
          40                               45                               50                               55

gat gag agg acg gtt gta aaa cga gcc ctc agg gat tca tca ctg aaa      544
Asp Glu Arg Thr Val Val Lys Arg Ala Leu Arg Asp Ser Ser Leu Lys
          60                               65                               70

agt gac atc tgc acc acc cca agc tgt gtg ata gca gct gcc aga atc      592
Ser Asp Ile Cys Thr Thr Pro Ser Cys Val Ile Ala Ala Ala Arg Ile
          75                               80                               85

ctc gaa aac atg gac caa tgc agg aac ccc tgt gaa aac ttc tac cag      640
Leu Glu Asn Met Asp Gln Ser Arg Asn Pro Cys Glu Asn Phe Tyr Gln
          90                               95                               100

tac gcc tgc gga ggc tgg ctg agg cac cac gtg atc cca gag acc aac      688
Tyr Ala Cys Gly Gly Trp Leu Arg His His Val Ile Pro Glu Thr Asn
          105                               110                               115

tcc cga tac agc gtc ttt gac atc ctg cgg gac gag ctg gag gtt atc      736
Ser Arg Tyr Ser Val Phe Asp Ile Leu Arg Asp Glu Leu Glu Val Ile
          120                               125                               130                               135

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Leu Lys Gly Val Leu Glu Asp Ser Thr Ser Gln His Arg Pro Ala Val
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Glu Lys Ala Lys Thr Leu Tyr Arg Ser Cys Met Asn Gln Ser Val Ile
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gag tac tat ttc cag gag gac aac aac cac aag gta cgg aaa gcc tac Glu Tyr Tyr Phe Gln Glu Asp Asn Asn His Lys Val Arg Lys Ala Tyr 250 255 260			1120,
ctg gag ttc atg acg tca gtg gcc act atg ctt agg aaa gac cag aac Leu Glu Phe Met Thr Ser Val Ala Thr Met Leu Arg Lys Asp Gln Asn 265 270 275			1168
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gtg ttg tct tct gtg gaa gtc gag ctg ttc cca gat gag gag gtg gtg Val Leu Ser Ser Val Glu Val Glu Leu Phe Pro Asp Glu Glu Val Val 345 350 355			1408
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Glu Leu Ile Glu Lys Ile Arg Ser Val Phe Val Asp Asn Leu Asp Glu	
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Ile Gly Ala Ala Val Val Asn Ala Phe Tyr Ser Pro Asn Arg Asn Gln	
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Ile Val Phe Pro Ala Gly Ile Leu Gln Pro Pro Phe Phe Ser Lys Asp	
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Gln Pro Gln Ser Leu Asn Phe Gly Gly Ile Gly Met Val Ile Gly His	
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Gly Asn Met Leu Asp Trp Trp Ser Asn Phe Ser Ala Arg His Phe Gln	
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 Leu Ala Asp Asn Gln Asn Val Asn Gly Phe Ser Thr Leu Gly Glu Asn
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 Ile Ala Asp Asn Gly Gly Val Arg Gln Ala Tyr Lys Ala Tyr Leu Arg
 665 670 675

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 Trp Leu Ala Asp Gly Gly Lys Asp Gln Arg Leu Pro Gly Leu Asn Leu
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acc tat gcc cag ctt ttc ttc atc aac tat gcc cag gtg tgg tgt ggg 2464
 Thr Tyr Ala Gln Leu Phe Phe Ile Asn Tyr Ala Gln Val Trp Cys Gly
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 Ser Pro Leu Lys Tyr Arg Val Leu Gly Ser Leu Gln Asn Leu Pro Gly
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 Phe Ser Glu Ala Phe His Cys Pro Arg Gly Ser Pro Met His Pro Met
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Val	Ile	Ala	Ala	Ala	Arg	Ile	Leu	Glu	Asn	Met	Asp	Gln	Ser	Arg	Asn	
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Pro	Cys	Glu	Asn	Phe	Tyr	Gln	Tyr	Ala	Cys	Gly	Gly	Trp	Leu	Arg	His	
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Ser	Val	Leu	Lys	Met	Val	Gly	Gly	Trp	Pro	Val	Ala	Met	Asp	Lys	Trp	
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Phe	Lys	Glu	Ala	Arg	Val	Asp	Tyr	Arg	Lys	Ala	Leu	Tyr	Gly	Thr	Thr				
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Val	Glu	Glu	Val	Arg	Trp	Arg	Glu	Cys	Val	Ser	Tyr	Val	Asn	Ser	Asn				
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Asp	Ser	Lys	Ser	Thr	Val	Arg	Glu	Leu	Ile	Glu	Lys	Ile	Arg	Ser	Val				
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Phe	Val	Asp	Asn	Leu	Asp	Glu	Leu	Asn	Trp	Met	Asp	Glu	Glu	Ser	Lys				
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Lys	Lys	Ala	Gln	Glu	Lys	Ala	Met	Asn	Ile	Arg	Glu	Gln	Ile	Gly	Tyr				
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Pro	Asp	Tyr	Ile	Leu	Glu	Asp	Asn	Asn	Lys	His	Leu	Asp	Glu	Glu	Tyr				
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Ser	Ser	Leu	Thr	Phe	Tyr	Glu	Asp	Leu	Tyr	Phe	Glu	Asn	Gly	Leu	Gln				
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Asn	Leu	Lys	Asn	Asn	Ala	Gln	Arg	Ser	Leu	Lys	Lys	Leu	Arg	Glu	Lys				
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Val	Asp	Gln	Asn	Leu	Trp	Ile	Ile	Gly	Ala	Ala	Val	Val	Asn	Ala	Phe				
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Tyr	Ser	Pro	Asn	Arg	Asn	Gln	Ile	Val	Phe	Pro	Ala	Gly	Ile	Leu	Gln				
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Pro	Pro	Phe	Phe	Ser	Lys	Asp	Gln	Pro	Gln	Ser	Leu	Asn	Phe	Gly	Gly				
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Ile	Gly	Met	Val	Ile	Gly	His	Glu	Ile	Thr	His	Gly	Phe	Asp	Asp	Asn				
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Gly	Arg	Asn	Phe	Asp	Lys	Asn	Gly	Asn	Met	Leu	Asp	Trp	Trp	Ser	Asn				
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Phe	Ser	Ala	Arg	His	Phe	Gln	Gln	Gln	Ser	Gln	Cys	Met	Ile	Tyr	Gln				

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Tyr Gly Asn Phe Ser Trp Glu Leu Ala Asp Asn Gln Asn Val Asn Gly	645	650	655
Phe Ser Thr Leu Gly Glu Asn Ile Ala Asp Asn Gly Gly Val Arg Gln	660	665	670
Ala Tyr Lys Ala Tyr Leu Arg Trp Leu Ala Asp Gly Gly Lys Asp Gln	675	680	685
Arg Leu Pro Gly Leu Asn Leu Thr Tyr Ala Gln Leu Phe Phe Ile Asn	690	695	700
Tyr Ala Gln Val Trp Cys Gly Ser Tyr Arg Pro Glu Phe Ala Val Gln	705	710	715
Ser Ile Lys Thr Asp Val His Ser Pro Leu Lys Tyr Arg Val Leu Gly	725	730	735
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Phe Leu Glu Gly Gly Leu Leu Leu Leu Leu Leu Leu Val Thr Ala Ala	
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Leu Val Ala Leu Gly Val Leu Tyr Ala Asp Arg Arg Gly Lys Gln Leu	
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Pro Arg Leu Ala Ser Arg Leu Cys Phe Leu Gln Glu Glu Arg Thr Phe	
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Val Lys Arg Lys Pro Arg Gly Ile Pro Glu Ala Gln Glu Val Ser Glu	
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Val Cys Thr Thr Pro Gly Cys Val Ile Ala Ala Ala Arg Ile Leu Gln	
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Asn Met Asp Pro Thr Thr Glu Pro Cys Asp Asp Phe Tyr Gln Phe Ala	
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Cys Gly Gly Trp Leu Arg Arg His Val Ile Pro Glu Thr Asn Ser Arg	
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Tyr Ser Ile Phe Asp Val Leu Arg Asp Glu Leu Glu Val Ile Leu Lys	
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Ala Val Leu Glu Asn Ser Thr Ala Lys Asp Arg Pro Ala Val Glu Lys	
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Ala Arg Thr Leu Tyr Arg Ser Cys Met Asn Gln Ser Val Ile Glu Lys	
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Arg Gly Ser Gln Pro Leu Leu Asp Ile Leu Glu Val Val Gly Gly Trp	
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Pro Val Ala Met Asp Arg Trp Asn Glu Thr Val Gly Leu Glu Trp Glu	
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Leu Glu Arg Gln Leu Ala Leu Met Asn Ser Gln Phe Asn Arg Arg Val	
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Ser	Glu	Cys	Met	Ile	Tyr	Gln	Tyr	Gly	Asn	Tyr	Ser	Trp	Asp	Leu	Ala		
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Asp	Asn	Gly	Gly	Val	Arg	Gln	Ala	Tyr	Lys	Ala	Tyr	Leu	Lys	Trp	Met		
			675					680					685				
gca	gag	ggt	ggc	aag	gac	cag	cag	ctg	ccc	ggc	ctg	gat	ctc	acc	cat	2112	
Ala	Glu	Gly	Gly	Lys	Asp	Gln	Gln	Leu	Pro	Gly	Leu	Asp	Leu	Thr	His		
			690					695					700				
gag	cag	ctc	ttc	ttc	atc	aac	tat	gcc	cag	gtg	tgg	tgc	ggg	tcc	tac	2160	
Glu	Gln	Leu	Phe	Phe	Ile	Asn	Tyr	Ala	Gln	Val	Trp	Cys	Gly	Ser	Tyr		
		705					710					715					
cgg	ccc	gag	ttc	gcc	atc	caa	tcc	atc	aag	aca	gac	gtc	cac	agt	ccc	2208	
Arg	Pro	Glu	Phe	Ala	Ile	Gln	Ser	Ile	Lys	Thr	Asp	Val	His	Ser	Pro		
		720				725					730						
ctg	aag	tac	agg	gta	ctg	ggg	tcg	ctg	cag	aac	ctg	gcc	gcc	ttc	gca	2256	
Leu	Lys	Tyr	Arg	Val	Leu	Gly	Ser	Leu	Gln	Asn	Leu	Ala	Ala	Phe	Ala		
735					740				745						750		
gac	acg	ttc	cac	tgt	gcc	cgg	ggc	acc	ccc	atg	cac	ccc	aag	gag	cga	2304	
Asp	Thr	Phe	His	Cys	Ala	Arg	Gly	Thr	Pro	Met	His	Pro	Lys	Glu	Arg		

755

760

765

tgc cgc gtg tgg tagccaaggc cctgccgcgc tgtgcggccc acgcccaccc 2356
 Cys Arg Val Trp
 770

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<212> PRT

<213> Homo sapiens

<400> 15

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 35 40 45

Leu Ala Ser Arg Leu Cys Phe Leu Gln Glu Glu Arg Thr Phe Val Lys
 50 55 60

Arg Lys Pro Arg Gly Ile Pro Glu Ala Gln Glu Val Ser Glu Val Cys
 65 70 75 80

Thr Thr Pro Gly Cys Val Ile Ala Ala Ala Arg Ile Leu Gln Asn Met
 85 90 95

Asp Pro Thr Thr Glu Pro Cys Asp Asp Phe Tyr Gln Phe Ala Cys Gly
 100 105 110

Gly Trp Leu Arg Arg His Val Ile Pro Glu Thr Asn Ser Arg Tyr Ser
 115 120 125

Ile Phe Asp Val Leu Arg Asp Glu Leu Glu Val Ile Leu Lys Ala Val
 130 135 140

Leu Glu Asn Ser Thr Ala Lys Asp Arg Pro Ala Val Glu Lys Ala Arg
 145 150 155 160

Thr Leu Tyr Arg Ser Cys Met Asn Gln Ser Val Ile Glu Lys Arg Gly
 165 170 175

Ser	Gln	Pro	Leu	Leu	Asp	Ile	Leu	Glu	Val	Val	Gly	Gly	Trp	Pro	Val	180	185	190
Ala	Met	Asp	Arg	Trp	Asn	Glu	Thr	Val	Gly	Leu	Glu	Trp	Glu	Leu	Glu	195	200	205
Arg	Gln	Leu	Ala	Leu	Met	Asn	Ser	Gln	Phe	Asn	Arg	Arg	Val	Leu	Ile	210	215	220
Asp	Leu	Phe	Ile	Trp	Asn	Asp	Asp	Gln	Asn	Ser	Ser	Arg	His	Ile	Ile	225	230	235
Tyr	Ile	Asp	Gln	Pro	Thr	Leu	Gly	Met	Pro	Ser	Arg	Glu	Tyr	Tyr	Phe	245	250	255
Asn	Gly	Gly	Ser	Asn	Arg	Lys	Val	Arg	Glu	Ala	Tyr	Leu	Gln	Phe	Met	260	265	270
Val	Ser	Val	Ala	Thr	Leu	Leu	Arg	Glu	Asp	Ala	Asn	Leu	Pro	Arg	Asp	275	280	285
Ser	Cys	Leu	Val	Gln	Glu	Asp	Met	Val	Gln	Val	Leu	Glu	Leu	Glu	Thr	290	295	300
Gln	Leu	Ala	Lys	Ala	Thr	Val	Pro	Gln	Glu	Glu	Arg	His	Asp	Val	Ile	305	310	315
Ala	Leu	Tyr	His	Arg	Met	Gly	Leu	Glu	Glu	Leu	Gln	Ser	Gln	Phe	Gly	325	330	335
Leu	Lys	Gly	Phe	Asn	Trp	Thr	Leu	Phe	Ile	Gln	Thr	Val	Leu	Ser	Ser	340	345	350
Val	Lys	Ile	Lys	Leu	Leu	Pro	Asp	Glu	Glu	Val	Val	Val	Tyr	Gly	Ile	355	360	365
Pro	Tyr	Leu	Gln	Asn	Leu	Glu	Asn	Ile	Ile	Asp	Thr	Tyr	Ser	Ala	Arg	370	375	380
Thr	Ile	Gln	Asn	Tyr	Leu	Val	Trp	Arg	Leu	Val	Leu	Asp	Arg	Ile	Gly	385	390	395
Ser	Leu	Ser	Gln	Arg	Phe	Lys	Asp	Thr	Arg	Val	Asn	Tyr	Arg	Lys	Ala	405	410	415
Leu	Phe	Gly	Thr	Met	Val	Glu	Glu	Val	Arg	Trp	Arg	Glu	Cys	Val	Gly	420	425	430
Tyr	Val	Asn	Ser	Asn	Met	Glu	Asn	Ala	Val	Gly	Ser	Leu	Tyr	Val	Arg	435	440	445
Glu	Ala	Phe	Pro	Gly	Asp	Ser	Lys	Ser	Met	Val	Arg	Glu	Leu	Ile	Asp	450	455	460
Lys	Val	Arg	Thr	Val	Phe	Val	Glu	Thr	Leu	Asp	Glu	Leu	Gly	Trp	Met	465	470	475
																		480

Asp Glu Glu Ser Lys Lys Lys Ala Gln Glu Lys Ala Met Ser Ile Arg
 485 490 495
 Glu Gln Ile Gly His Pro Asp Tyr Ile Leu Glu Glu Met Asn Arg Arg
 500 505 510
 Leu Asp Glu Glu Tyr Ser Asn Leu Asn Phe Ser Glu Asp Leu Tyr Phe
 515 520 525
 Glu Asn Ser Leu Gln Asn Leu Lys Val Gly Ala Gln Arg Ser Leu Arg
 530 535 540
 Lys Leu Arg Glu Lys Val Asp Pro Asn Leu Trp Ile Ile Gly Ala Ala
 545 550 555 560
 Val Val Asn Ala Phe Tyr Ser Pro Asn Arg Asn Gln Ile Val Phe Pro
 565 570 575
 Ala Gly Ile Leu Gln Pro Pro Phe Phe Ser Lys Glu Gln Pro Gln Ala
 580 585 590
 Leu Asn Phe Gly Gly Ile Gly Met Val Ile Gly His Glu Ile Thr His
 595 600 605
 Gly Phe Asp Asp Asn Gly Arg Asn Phe Asp Lys Asn Gly Asn Met Met
 610 615 620
 Asp Trp Trp Ser Asn Phe Ser Thr Gln His Phe Arg Glu Gln Ser Glu
 625 630 635 640
 Cys Met Ile Tyr Gln Tyr Gly Asn Tyr Ser Trp Asp Leu Ala Asp Glu
 645 650 655
 Gln Asn Val Asn Gly Phe Asn Thr Leu Gly Glu Asn Ile Ala Asp Asn
 660 665 670
 Gly Gly Val Arg Gln Ala Tyr Lys Ala Tyr Leu Lys Trp Met Ala Glu
 675 680 685
 Gly Gly Lys Asp Gln Gln Leu Pro Gly Leu Asp Leu Thr His Glu Gln
 690 695 700
 Leu Phe Phe Ile Asn Tyr Ala Gln Val Trp Cys Gly Ser Tyr Arg Pro
 705 710 715 720
 Glu Phe Ala Ile Gln Ser Ile Lys Thr Asp Val His Ser Pro Leu Lys
 725 730 735
 Tyr Arg Val Leu Gly Ser Leu Gln Asn Leu Ala Ala Phe Ala Asp Thr
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 Phe His Cys Ala Arg Gly Thr Pro Met His Pro Lys Glu Arg Cys Arg
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 Val Trp
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gcgaggcccc acgaggaggc cggcggccac gcgcatcccc tagcccaggt ggcccaggtc 180
tgcaccgagg cggcctcggc gccg atg gag ccc ccg tat tcg ctg acg gcg 231
Met Glu Pro Pro Tyr Ser Leu Thr Ala
1 5
cac tac gat gag ttc caa gag gtc aag tac gtg agc cgc tgc ggc gcg 279
His Tyr Asp Glu Phe Gln Glu Val Lys Tyr Val Ser Arg Cys Gly Ala
10 15 20 25
ggg ggc gcg cgc ggg gcc tcc ctg ccc ccg ggc ttc ccg ttg ggc gct 327
Gly Gly Ala Arg Gly Ala Ser Leu Pro Pro Gly Phe Pro Leu Gly Ala
30 35 40
gcg cgc agc gcc acc ggg gcc cgg tcc ggg ctg ccg cgc tgg aac cgg 375
Ala Arg Ser Ala Thr Gly Ala Arg Ser Gly Leu Pro Arg Trp Asn Arg
45 50 55
cgc gag gtg tgc ctg ctg tcg ggg ctg gtg ttc gcc gcc ggc etc tgc 423
Arg Glu Val Cys Leu Leu Ser Gly Leu Val Phe Ala Ala Gly Leu Cys
60 65 70
gcc att ctg gcg gct atg ctg gcc ctc aag tac ctg ggc ccg gtc gcg 471
Ala Ile Leu Ala Ala Met Leu Ala Leu Lys Tyr Leu Gly Pro Val Ala
75 80 85
gcc ggc ggc ggc gcc tgt ccc gag ggc tgc cct gag cgc aag gcc ttc 519
Ala Gly Gly Gly Ala Cys Pro Glu Gly Cys Pro Glu Arg Lys Ala Phe
90 95 100 105
gcg cgc gcc gct cgc ttc ctg gcc gcc aac ctg gac gcc agc atc gac 567
Ala Arg Ala Ala Arg Phe Leu Ala Ala Asn Leu Asp Ala Ser Ile Asp
110 115 120
cca tgc cag gac ttc tac tcg ttc gcc tgc ggc ggt tgg ctg cgg cgc 615
Pro Cys Gln Asp Phe Tyr Ser Phe Ala Cys Gly Gly Trp Leu Arg Arg
125 130 135
cac gcc atc ccc gac gac aag ctc acc tat ggc acc atc gcg gca atc 663
His Ala Ile Pro Asp Asp Lys Leu Thr Tyr Gly Thr Ile Ala Ala Ile

140	145	150	
ggc gag caa aac gag gag cgc cta cgg cgc ctg ctg gcg cgg ccc ggg Gly Glu Gln Asn Glu Glu Arg Leu Arg Arg Leu Leu Ala Arg Pro Gly 155 160 165			711
ggt ggg cct ggc ggc gcg gcc cag cgc aag gtg cgc gcc ttc ttc cgc Gly Gly Pro Gly Gly Ala Ala Gln Arg Lys Val Arg Ala Phe Phe Arg 170 175 180 185			759
tgc tgc ctc gac atg cgc gag atc gag cga ctg ggc ccg cga ccc atg Ser Cys Leu Asp Met Arg Glu Ile Glu Arg Leu Gly Pro Arg Pro Met 190 195 200			807
cta gag gtc atc gag gac tgc ggg ggc tgg gac ctg ggc ggc gcg gag Leu Glu Val Ile Glu Asp Cys Gly Gly Trp Asp Leu Gly Gly Ala Glu 205 210 215			855
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agc ctg gac gac agg aac tcc tgc cgc tac gtc atc cgc att gac cag Ser Leu Asp Asp Arg Asn Ser Ser Arg Tyr Val Ile Arg Ile Asp Gln 250 255 260 265			999
gat ggg ctc acc ctg cca gag agg acc ctg tac ctc gct cag gat gag Asp Gly Leu Thr Leu Pro Glu Arg Thr Leu Tyr Leu Ala Gln Asp Glu 270 275 280			1047
gac agt gag aag gtc ctg gca gca tac agg gtg ttc atg gag cga gtg Asp Ser Glu Lys Val Leu Ala Ala Tyr Arg Val Phe Met Glu Arg Val 285 290 295			1095
ctc agc ctc ctg ggt gca gac gct gtg gaa cag aag gcc caa gag atc Leu Ser Leu Leu Gly Ala Asp Ala Val Glu Gln Lys Ala Gln Glu Ile 300 305 310			1143
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gac cta cgg cga gat gtc agc tcc atg tac aac aag gtg acg ctg ggg Asp Leu Arg Arg Asp Val Ser Ser Met Tyr Asn Lys Val Thr Leu Gly 330 335 340 345			1239
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agt gaa cac ctg tcc ccg cca ttc cgt gag gca ctg cac gag ctg gca Ser Glu His Leu Ser Pro Phe Arg Glu Ala Leu His Glu Leu Ala 410 415 420 425	1479
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gta cat gag cac ttc tca gct gcc agc aaa gcc aag gtg cag cag cta Val His Glu His Phe Ser Ala Ala Ser Lys Ala Lys Val Gln Gln Leu 460 465 470	1623
gtg gaa gac atc aag tac atc ctg ggc cag cgc ctg gag gag ctg gac Val Glu Asp Ile Lys Tyr Ile Leu Gly Gln Arg Leu Glu Glu Leu Asp 475 480 485	1671
tgg atg gac gcc gag acc agg gct gct gct cgg gcc aag ctc cag tac Trp Met Asp Ala Glu Thr Arg Ala Ala Ala Arg Ala Lys Leu Gln Tyr 490 495 500 505	1719
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att cgg cag gag gtg gac aag tcc acg tgg ctg ctc ccc cca cag gcg Ile Arg Gln Glu Val Asp Lys Ser Thr Trp Leu Leu Pro Pro Gln Ala 555 560 565	1911
ctc aat gcc tac tat cta ccc aac aag aac cag atg gtg ttc ccc gcg Leu Asn Ala Tyr Tyr Leu Pro Asn Lys Asn Gln Met Val Phe Pro Ala 570 575 580 585	1959
ggc atc ctg cag ccc acc ctg tac gac cct gac ttc cca cag tct ctc Gly Ile Leu Gln Pro Thr Leu Tyr Asp Pro Asp Phe Pro Gln Ser Leu 590 595 600	2007

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Asn Tyr Gly Gly Ile Gly Thr Ile Ile Gly His Glu Leu Thr His Gly	
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Tyr Asp Asp Trp Gly Gly Gln Tyr Asp Arg Ser Gly Asn Leu Leu His	
620 625 630	
tgg tgg acg gag gcc tcc tac agc cgc ttc ctg cga aag gct gag tgc	2151
Trp Trp Thr Glu Ala Ser Tyr Ser Arg Phe Leu Arg Lys Ala Glu Cys	
635 640 645	
atc gtc cgt ctc tat gac aac ttc act gtc tac aac cag cgg gtg aac	2199
Ile Val Arg Leu Tyr Asp Asn Phe Thr Val Tyr Asn Gln Arg Val Asn	
650 655 660 665	
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Gly Lys His Thr Leu Gly Glu Asn Ile Ala Asp Met Gly Gly Leu Lys	
670 675 680	
ctg gcc tac cac gcc tat cag aag tgg gtg cgg gag cac ggc cca gag	2295
Leu Ala Tyr His Ala Tyr Gln Lys Trp Val Arg Glu His Gly Pro Glu	
685 690 695	
cac cca ctt ccc cgg ctc aag tac aca cat gac cag ctc ttc ttc att	2343
His Pro Leu Pro Arg Leu Lys Tyr Thr His Asp Gln Leu Phe Phe Ile	
700 705 710	
gcc ttt gcc cag aac tgg tgc atc aag cgg cgg tgc cag tcc atc tac	2391
Ala Phe Ala Gln Asn Trp Cys Ile Lys Arg Arg Ser Gln Ser Ile Tyr	
715 720 725	
ctg cag gtg ctg act gac aag cat gcc cct gag cac tac agg gtg ctg	2439
Leu Gln Val Leu Thr Asp Lys His Ala Pro Glu His Tyr Arg Val Leu	
730 735 740 745	
ggc agt gtg tcc cag ttt gag gag ttt ggc cgg gtt tta cac tgt cca	2487
Gly Ser Val Ser Gln Phe Glu Glu Phe Gly Arg Val Leu His Cys Pro	
750 755 760	
aag gtc tca ccc atg aac cct gcc cac aag tgt tcc gtg tgg	2529
Lys Val Ser Pro Met Asn Pro Ala His Lys Cys Ser Val Trp	
765 770 775	
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<210> 17
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<212> PRT
<213> Homo sapiens

<400> 17

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Val	Lys	Tyr	Val	Ser	Arg	Cys	Gly	Ala	Gly	Gly	Ala	Arg	Gly	Ala	Ser	
			20					25					30			
Leu	Pro	Pro	Gly	Phe	Pro	Leu	Gly	Ala	Ala	Arg	Ser	Ala	Thr	Gly	Ala	
			35				40					45				
Arg	Ser	Gly	Leu	Pro	Arg	Trp	Asn	Arg	Arg	Glu	Val	Cys	Leu	Leu	Ser	
	50					55					60					
Gly	Leu	Val	Phe	Ala	Ala	Gly	Leu	Cys	Ala	Ile	Leu	Ala	Ala	Met	Leu	
65					70					75					80	
Ala	Leu	Lys	Tyr	Leu	Gly	Pro	Val	Ala	Ala	Gly	Gly	Gly	Ala	Cys	Pro	
				85					90					95		
Glu	Gly	Cys	Pro	Glu	Arg	Lys	Ala	Phe	Ala	Arg	Ala	Ala	Arg	Phe	Leu	
			100					105					110			
Ala	Ala	Asn	Leu	Asp	Ala	Ser	Ile	Asp	Pro	Cys	Gln	Asp	Phe	Tyr	Ser	
		115					120					125				
Phe	Ala	Cys	Gly	Gly	Trp	Leu	Arg	Arg	His	Ala	Ile	Pro	Asp	Asp	Lys	
130						135					140					
Leu	Thr	Tyr	Gly	Thr	Ile	Ala	Ala	Ile	Gly	Glu	Gln	Asn	Glu	Glu	Arg	
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Leu	Arg	Arg	Leu	Leu	Ala	Arg	Pro	Gly	Gly	Gly	Pro	Gly	Gly	Ala	Ala	
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Gln	Arg	Lys	Val	Arg	Ala	Phe	Phe	Arg	Ser	Cys	Leu	Asp	Met	Arg	Glu	
			180					185					190			
Ile	Glu	Arg	Leu	Gly	Pro	Arg	Pro	Met	Leu	Glu	Val	Ile	Glu	Asp	Cys	
	195						200					205				
Gly	Gly	Trp	Asp	Leu	Gly	Gly	Ala	Glu	Glu	Arg	Pro	Gly	Val	Ala	Ala	
	210					215					220					
Arg	Trp	Asp	Leu	Asn	Arg	Leu	Leu	Tyr	Lys	Ala	Gln	Gly	Val	Tyr	Ser	
225				230						235					240	
Ala	Ala	Ala	Leu	Phe	Ser	Leu	Thr	Val	Ser	Leu	Asp	Asp	Arg	Asn	Ser	
			245						250					255		
Ser	Arg	Tyr	Val	Ile	Arg	Ile	Asp	Gln	Asp	Gly	Leu	Thr	Leu	Pro	Glu	
			260					265					270			

Arg Thr Leu Tyr Leu Ala Gln Asp Glu Asp Ser Glu Lys Val Leu Ala
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 Ala Tyr Arg Val Phe Met Glu Arg Val Leu Ser Leu Leu Gly Ala Asp
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 Ala Val Glu Gln Lys Ala Gln Glu Ile Leu Gln Val Glu Gln Gln Leu
 305 310 315 320
 Ala Asn Ile Thr Val Ser Glu Tyr Asp Asp Leu Arg Arg Asp Val Ser
 325 330 335
 Ser Met Tyr Asn Lys Val Thr Leu Gly Gln Leu Gln Lys Ile Thr Pro
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 His Leu Arg Trp Lys Trp Leu Leu Asp Gln Ile Phe Gln Glu Asp Phe
 355 360 365
 Ser Glu Glu Glu Glu Val Val Leu Leu Ala Thr Asp Tyr Met Gln Gln
 370 375 380
 Val Ser Gln Leu Ile Arg Ser Thr Pro His Arg Val Leu His Asn Tyr
 385 390 395 400
 Leu Val Trp Arg Val Val Val Val Leu Ser Glu His Leu Ser Pro Pro
 405 410 415
 Phe Arg Glu Ala Leu His Glu Leu Ala Gln Glu Met Glu Gly Ser Asp
 420 425 430
 Lys Pro Gln Glu Leu Ala Arg Val Cys Leu Gly Gln Ala Asn Arg His
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 Phe Gly Met Ala Leu Gly Ala Leu Phe Val His Glu His Phe Ser Ala
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 Ala Ser Lys Ala Lys Val Gln Gln Leu Val Glu Asp Ile Lys Tyr Ile
 465 470 475 480
 Leu Gly Gln Arg Leu Glu Glu Leu Asp Trp Met Asp Ala Glu Thr Arg
 485 490 495
 Ala Ala Ala Arg Ala Lys Leu Gln Tyr Met Met Val Met Val Gly Tyr
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 Pro Asp Phe Leu Leu Lys Pro Asp Ala Val Asp Lys Glu Tyr Glu Phe
 515 520 525
 Glu Val His Glu Lys Thr Tyr Phe Lys Asn Ile Leu Asn Ser Ile Arg
 530 535 540
 Phe Ser Ile Gln Leu Ser Val Lys Lys Ile Arg Gln Glu Val Asp Lys
 545 550 555 560
 Ser Thr Trp Leu Leu Pro Pro Gln Ala Leu Asn Ala Tyr Tyr Leu Pro
 565 570 575

Asn Lys Asn Gln Met Val Phe Pro Ala Gly Ile Leu Gln Pro Thr Leu
 580 585 590

Tyr Asp Pro Asp Phe Pro Gln Ser Leu Asn Tyr Gly Gly Ile Gly Thr
 595 600 605

Ile Ile Gly His Glu Leu Thr His Gly Tyr Asp Asp Trp Gly Gly Gln
 610 615 620

Tyr Asp Arg Ser Gly Asn Leu Leu His Trp Trp Thr Glu Ala Ser Tyr
 625 630 635 640

Ser Arg Phe Leu Arg Lys Ala Glu Cys Ile Val Arg Leu Tyr Asp Asn
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Phe Thr Val Tyr Asn Gln Arg Val Asn Gly Lys His Thr Leu Gly Glu
 660 665 670

Asn Ile Ala Asp Met Gly Gly Leu Lys Leu Ala Tyr His Ala Tyr Gln
 675 680 685

Lys Trp Val Arg Glu His Gly Pro Glu His Pro Leu Pro Arg Leu Lys
 690 695 700

Tyr Thr His Asp Gln Leu Phe Phe Ile Ala Phe Ala Gln Asn Trp Cys
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Ile Lys Arg Arg Ser Gln Ser Ile Tyr Leu Gln Val Leu Thr Asp Lys
 725 730 735

His Ala Pro Glu His Tyr Arg Val Leu Gly Ser Val Ser Gln Phe Glu
 740 745 750

Glu Phe Gly Arg Val Leu His Cys Pro Lys Val Ser Pro Met Asn Pro
 755 760 765

Ala His Lys Cys Ser Val Trp
 770 775